What is Claimed is:

1. A process for staining sperm cells, the process comprising forming a staining mixture containing intact viable sperm cells and a DNA selective fluorescent dye, and subjecting the staining mixture to a temperature in excess of 40°C.

2. The process of claim 1, wherein the dye is a UV excitable or a visible light excitable dye.

3. The process of claim 2, wherein the dye is selected from the group consisting of a bisbenzimide, SYBR-14, and a conjugate, an analog, or a derivative thereof.

4. The process of claim 3, wherein the dye is selected from the group consisting of Hoechst 33342, Hoechst 33258, SYBR-14, and 6-{[3-((2Z)-2-{[1-(difluoroboryl)-3,5-dimethyl-1*H*-pyrrol-2-yl]methylene}-2*H*-pyrrol-5-yl)propanoyl]amino}-*N*-[3-(methyl{3-[({4-[6-(4-methylpiperazin-1-yl)-1*H*,3'*H*-2,5'-bibenzimidazol-2'-yl]phenoxy}acetyl)amino]propyl}amino)propyl]hexanamide.

5. The process of claims 1, wherein the staining mixture is subjected to the temperature for a period of time sufficient to allow the dye to bind the DNA such that X and Y bearing sperm cells can be differentially sorted based upon fluorescence.

6. The process of claim 5, wherein the period of time is from about 1 minute to about 160 minutes.

7. The process of claim 5, wherein the period of time is less than about 60 minutes.

8. The process of claim 5, wherein the period of time is less than about 30 minutes.

9. The process of claim 5, wherein the dye concentration is from about 0.1μM to about 1000μM.

10. The process of claim 9, wherein the dye concentration is from about 100μM to about 600μM.

11. The process of claim 5, wherein the staining mixture is subjected to a temperature in excess of about 41°C.

12. The process of claim 11, wherein the staining mixture is subjected to a temperature of between about 41°C and about 50°C.

13. The process of claim 12, wherein the staining mixture is subjected to a temperature of between about 41°C and about 47°C.

14. The process of claim 13, wherein the staining mixture is subjected to a temperature of between about 42°C and about 45°C.

15. The process of claim 14, wherein the staining mixture is subjected to a temperature of about 43°C.

16. The process of claim 1, wherein the step of forming a staining mixture comprises combining a buffer with the sperm cells.

17. The process of claim 16, wherein the buffer is combined with the sperm cells to form a sperm suspension, and the sperm suspension is combined with a DNA selective dye to form the staining mixture.

18. The process of claim 1, wherein the step of forming a staining mixture comprises combining a buffer with a DNA selective dye to form a buffered bye solution, and combining the buffered dye solution with the sperm cells to form the staining mixture.

19. The process of claim 1, further comprising the step of combining the a quencher with the staining mixture.

20. The process of claim 19, wherein the quencher is selected from the group consisting of FD&C #40 and propidium iodide.

21. The process of claim 20, wherein the quencher is FD&C #40.

22. The process of claim 20, wherein the quencher is FD&C #40 and the dye is Hoechst 33342.

23. The process of claim 20, wherein the quencher is propidium iodide and the dye is SYBR-14.

24. The process of claim 1, wherein the staining mixture further contains a motility inhibitor.

25. The process of claim 1, wherein the step of forming a staining mixture comprises combining a motility inhibitor with the sperm cells to form an inhibited sperm suspension, and combining the inhibited sperm suspension with a DNA selective dye to form the staining mixture.

26. The process of claim 25, wherein the motility inhibitor comprises a carbonate based motility inhibitor.

27. The process of claim 26, wherein the carbonate based motility inhibitor comprises $NaHCO_3$, $KHCO_3$, and $C_6H_8O_7 \cdot H_2O$.

28. The process of claim 27, wherein the carbonate based motility inhibitor comprises 0.097 moles/L of $NaHCO_3$, 0.173 moles/L of $KHCO_3$, 0.090 moles/L $C_6H_8O_7 \cdot H_2O$ in water.

29. The process of claim 1, wherein the staining mixture further contains a composition which regulates oxidation/reduction reactions intracellularly or extracellularly.

30. The process of claim 29, wherein the composition which regulates oxidation/reduction reactions intracellularly or extracellularly is selected from the group consisting of pyruvate, vitamin K, lipoic acid, glutathione, flavins, quinones, superoxide dismutase, and superoxide dismutase mimics.

31. The process of claim 30, wherein the composition which regulates oxidation/reduction reactions intracellularly or extracellularly is selected from the group consisting of pyruvate, vitamin K, and lipoic acid.

32. The process of claim 31, wherein the composition which regulates oxidation/reduction reactions intracellularly or extracellularly comprises pyruvate at a concentration from about 0.5μM to about 50mM.

33. The process of claim 32, wherein the composition which regulates oxidation/reduction reactions intracellularly or extracellularly comprises pyruvate at a concentration from about 10mM to about 15mM.

34. The process of claim 33, wherein the composition which regulates oxidation/reduction reactions intracellularly or extracellularly comprises pyruvate at a concentration of about 10mM.

35. The process of claim 31, wherein the composition which regulates oxidation/reduction reactions intracellularly or extracellularly comprises vitamin K at a concentration of about 1μM to about 100μM.

36. The process of claim 35, wherein the composition which regulates oxidation/reduction reactions intracellularly or extracellularly comprises vitamin K at a concentration of about 100μM.

37. The process of claim 31, wherein the composition which regulates oxidation/reduction reactions intracellularly or extracellularly comprises lipoic acid at a concentration of about 0.1mM to about 1.0mM.

38. The process of claim 31, wherein the composition which regulates oxidation/reduction reactions intracellularly or extracellularly comprises lipoic acid at a concentration of about 1.0mM.